

IN THE CLAIMS:

The status and content of each claim follows.

1. (currently amended) A method of manufacturing an electrolyte comprising:
coupling a porous substrate to a charged electrode; [[and]]
electrodepositing a polymeric electrolyte on said porous substrate including in pores
of said porous substrate; and
coupling said electrolyte and porous substrate to an anode, a cathode and a catalyst.
2. (currently mended) The method of claim 1, wherein said substrate
comprises a conductive porous substrate; and said polymeric electrolyte coats and completely
insulates an outer surface of said conductive porous substrate.
3. (original) The method of claim 2, wherein said conductive porous
substrate comprises a porous stainless steel substrate.
4. (currently amended) The method of ~~claim 2~~ claim 1, wherein said porous
substrate ~~is electrically coupled to said charged electrode comprises steel wool.~~
5. (original) The method of claim 2, wherein said electrodepositing a
polymeric electrolyte further comprises:
disposing said porous substrate and said charged electrode in a polymeric electrolyte
solution containing charged polymeric electrolyte particles; and
generating an electric field in said polymeric electrolyte solution;

wherein said generated electric field accelerates charged polymeric electrolyte particles to said porous substrate.

6. (original) The method of claim 5, wherein said charged polymeric electrolyte particles further comprise perfluorosulfonate ionomer particles.

7. (original) The method of claim 6, wherein said perfluorosulfonate ionomer particles are deposited on said porous substrate by electrophoretic deposition.

8. (currently amended) The method of ~~claim 7~~ claim 1, further comprising removing deposited polymeric electrolyte perfluorosulfonate ionomer particles from an outer surface of said porous substrate, while leaving said polymeric electrolyte in pores of said porous substrate.

9. (currently amended) The method of claim 8, wherein said removal of deposited perfluorosulfonate ionomer particles polymeric electrolyte comprises machining said deposited electrolyte particles with a blade.

10. (previously presented) The method of claim 1, wherein said electrodepositing a polymeric electrolyte further comprises:

disposing said substrate and said charged electrode in a polymeric electrolyte solution containing charged polymeric electrolyte ions; and
generating an electric field in said polymeric electrolyte solution;

wherein said electric field accelerates charged polymeric electrolyte ions to said substrate.

11. (original) The method of claim 10, wherein said charged polymeric electrolyte ions further comprise perfluorosulfonate ionomer ions.

12. (original) The method of claim 11, wherein said perfluorosulfonate ionomer ions are deposited on said porous substrate by electrolytic deposition.

13. (original) The method of claim 12, wherein said perfluorosulfonate ionomer ions are deposited on an outer surface of said porous substrate.

14. (original) The method of claim 1, wherein said substrate comprises a non-conductive porous substrate.

15. (currently amended) The method of claim 14 claim 1, in which said electrodepositing a polymeric electrolyte further comprises:
~~wherein said porous substrate is mechanically coupled to said charged electrode~~
~~depositing charged polymeric electrolyte particles on a substrate by electrophoretic deposition;~~

subsequently, depositing additional charged polymeric electrolyte particles on said substrate by electrolytic deposition; and

treating a surface of said substrate by removing polymeric electrolyte particles
between said depositing of charged polymeric electrolyte particles and said depositing of
additional charged polymeric electrolyte particles.

16. (previously presented) The method of claim 14, wherein said electrodepositing a polymeric electrolyte further comprises:

disposing said porous substrate and said charged electrode in a polymeric electrolyte solution containing charged polymeric electrolyte particles; and
generating an electric field in said polymeric electrolyte solution;
wherein said electric field accelerates charged polymeric electrolyte particles to said porous substrate.

17. (original) The method of claim 16, wherein said charged polymeric electrolyte particles further comprise perfluorosulfonate ionomer particles.

18. (original) The method of claim 17, wherein said perfluorosulfonate ionomer particles are deposited on said porous substrate by electrophoretic deposition.

19-54. (cancelled)

55. (previously presented) A polymeric electrolyte manufactured by the method of claim 1.

56. (currently amended) A fuel cell comprising:

[[an]] said anode;

[[a]] said cathode; and

[[a]] said polymeric electrolyte disposed between said anode and cathode, said polymeric electrolyte manufactured by the method of claim 1.

57-67. (cancelled)